

Title (en)

A phase acquisition loop for a read channel and related read channel, system, and method

Title (de)

Phasenerfassungsschleife für einen Lesekanal und entsprechender Lesekanal, System und Verfahren

Title (fr)

Boucle d'acquisition en phase pour un canal lu et canal lu associé, système et procédé

Publication

EP 1713069 A1 20061018 (EN)

Application

EP 06252035 A 20060412

Priority

- US 40216506 A 20060410
- US 67082005 P 20050412
- US 67094205 P 20050412

Abstract (en)

A phase-acquisition (PA) loop for a read channel comprises an accumulator, a comparator, and a filter. The accumulator holds an acquired phase-correction value corresponding to a difference between a phase of a sample clock and a phase of data carried by a read signal, and provides the acquired phase-correction value to a circuit that modifies the read signal to compensate for the phase difference. The comparator receives a reference phase-correction value that also corresponds to the difference between the phases of the sample clock and the data, and generates an error signal that is related to a difference between the reference and acquired phase-correction values. And the filter causes the acquired phase-correction value to have a predetermined relationship to the reference phase-correction value. Because such a PA loop may require significantly fewer samples of a read-signal preamble than prior PA loops requires to acquire the phase between a sample clock and data carried by a read signal, such a PA loop may allow one to significantly reduce the length of the preamble.

IPC 8 full level

G11B 20/10 (2006.01); **G11B 20/14** (2006.01)

CPC (source: EP US)

G11B 5/09 (2013.01 - EP US); **G11B 20/10009** (2013.01 - EP US); **G11B 20/1403** (2013.01 - EP US)

Citation (applicant)

US 5835295 A 19981110 - BEHRENS RICHARD T [US]

Citation (search report)

- [X] US 5835295 A 19981110 - BEHRENS RICHARD T [US]
- [A] P. KOVINTAVEWAT ET AL.: "Coding and signal processing for magnetic recording systems ch. 27", July 2004, CRC PRESS, XP002384341

Designated contracting state (EPC)

DE FR GB IT

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

US 2006256464 A1 20061116; US 7773324 B2 20100810; EP 1713069 A1 20061018

DOCDB simple family (application)

US 40216506 A 20060410; EP 06252035 A 20060412